An essay on
the History and Theory
of Menstruation;

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On the History and Theory of Menstruation.

Before taking into consideration, the speculative notions, as regards, the cause of this curious and interesting phenomenon; I deem it of primary importance, first, to speak of its natural history, and appearance. By the term menstruation, or menses, we understand, a periodical discharge of a sanguineous fluid, which takes place from the uterus every lunar month; and during its flow the woman is said to be out of order, or unwell. Almost all women, are subject to this evacuation, and the derangement, or retention of which, (except during utero gestation and lactation) impairs the health, both of body and mind, and the still higher offices of its destination is suspended viz impregnation. The periods of life

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at which this discharge makes its first appearance, is termed puberty; which term, implies the power of reproduction. It not unfrequently happens, with young women, who have never menstruated, for this discharge to come on without any premonitory signs of its approach, or attendant indisposition; but for the most part, it is preceded by uneasy sensations, very often by affections of the stomach and bowels, pain about the lumber vertebra and pelvis, travelling down the thighs, and various symptoms of an hysterical nature. These affections, which are more or leſs urgent in different individuals, gradually subside; but at the end of a month, they return with increased severity, accompanied with colicky pains, quick tense pulse, and now and then with a hot, dry skin, and desire to vomit. There now iſsues from the vagina, a serous fluid slightly

ly red, but does not become perfectly sanguineous for several periods. After the discharge of a few drops, even, the symptoms above enumerated diminish in intensity and finally disappear; a slight degree of debility tho', may succeed to this stage, and the dark purple areola which surrounds the eye, bespeaks its visitation. After a short time, the girl menstruates, with but very little inconvenience; tho' some are not thus fortunate, but are tortured by severe spasmodic pains and other distreſsing symptoms through out life at every menstrual period. When the uterine system is about to take on its self, the performance of this function, certain changes take place proclaiming the age of puberty. The uterus and ovaria, become more developed, and finally receive their adult form; the vagina enlar-

ges; the mons veneris swells up, and is covered with hair; the glandular substance of the breast is unfolded, and the cellular and adipose part increased; at the same time the mental functions become more invigorated, and new passions assert their sovereignty over the female heart. The varieties of constitution, of climate, and mode of life, have great influence on the earlier, or later manifestation of this phenomenon of puberty. There seems to exist, a very strong analogy, derived from the vivifying impulse of heat, upon vegetables, and the female constitution with respect to menstruation, for in general, the warmer the climate, the earlier will the menses appear. The inhabitants of tropical climates, begin to menstruate long before, and terminate much earlier in life, than those who dwell in northern regions.

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Thus, in Asia, and Africa, the catamenia make their first appearance at ten, or even eight, or nine years of age. Whilst in the northern countries of Europe, women do not arrive at puberty, untill they are eighteen, twenty or twenty five years old; and on the authority of Linnaeus, we are authorised in saying, that in very cold climates, such as Lapland, that the menstrual flux does not recur more than twice or thrice a year, and that during the summer season. In this country, and the temperate parts of Europe, it commonly appears, between the thirteenth, and sixteenth years, and continues regularly, for the most part, untill the fortieth, forty fourth or fifth years, lasting for a period of about triginti annos, when it ceases. The quantity evacuated at every period depends much on the variety of constitution,

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of climate, and the greater or leſs degree of refinement in the individual; but it frequently varies in different women of the same climate, and even in the same woman at different periods. In this, as in all other temperate climates, the amount commonly discharged, varies from three, to five or six ounces. There is, also, no little variety, as regards the lapse of time between, and, for the completion of each menstrual period. In some, it returns with an uncommon degree of accuracy; to the very day or hour, whilst in others, it may vary several days, without occasioning any inconvenience whatever. The length of time, neceſsary for the perfection of the periods, is also subject to many contingences; for instance, we meet with some cases, which do not require more than a few hours, when in others, and especially

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those, who live luxuriously, and are confined, to close warm chambers, demand for its completion ~~completion~~, not leſs than six, eight and sometimes ten days; the quantity evacuated too, from such women, is considerably increased, probably amounting to eight or ten ounces. But in a large majority of cases, this fluid gradually drills from the uterus, in the space of from three to five days. The menses, are obstructed during pregnancy and lactation; if the latter, however, is continued longer than the ordinary period, it is apt to return, and on its reappearance the milk becomes either, vitiated, or its secretion entirely suspended. That, the menstrual flux, is uniformly & constantly obstructed during pregnancy, is an aſsertion, which as yet remains unsettled. The weight of authority however, is undoubtedly in favour of the proposition.

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Among these, we find the celebrated names of Baudelocque, ~~and~~ Denman and in fact most of the modern writers on the subject. There sometimes takes place from the vagina, a bloody discharge, which recurs with such periodical regularity, that, upon a superficial examination, might be mistaken for the true menstruous fluid. Of the occasional recurrence of such cases we have the undoubted authority of Drs Chapman and James. This circumstance, must have given origin to the supposition of the menses continuing throughout utero gestation. But on close inquiry, into the nature of this discharge, it would most unquestionably present all the phenomena of hemorrhagic blood, viz. coagulability, and seperation into its proximate parts. Besides, the particular state of the

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gravid uterus, would by no means admit of its recurrence; coexistent with conception, the cavity of the uterus is lined by the membrana decidua, and but a very short time elapses, before the os tincæ, is hermetically sealed, as it were, by thick, tenacious mucus, thereby denying any communication between the uterine cavity, and the vagina. Things, being thus circumstanced, were the menses secreted, it would be poured out between the membrana decidua and propria, which would certainly destroy their connection (especially in the earlier months of pregnancy) and uterine hemorrhage would be the natural consequence. Again, the specific action which the vessels of the uterus take on, for the formation and further development of this membrane, seems totally inconsistent

sistent with the menstrual secretion. For, this we see clearly exemplified, in cases of Dysmenorrhœa, dependent on the wrong or perverted action of the uterus forming the deciduous coat; and the first appearances of the healthy return of this discharge is the coming away of this membrane. Of the identity of the two membranes, we have the concurrent testimony of Drs Denman and Baillie. But on the contrary, what shall we say in reply to facts, incontrovertible opposing tooth and nail, this doctrine. Dr Dewees, in his lectures on midwifery, cites two cases, in both of which the menses recurred with the utmost punctuality throut the earlier months of pregnancy. One of those women, was, the mother of thirteen children, and during each period of utero gestation, she menstrua-

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-ted with perfect periodical regularity for the first five or six months, and in one instance, up to the eighth month of pregnancy. This, very interesting case, came within the immediate sphere and observation of Dr. Dewees himself, 'tis not therefore, hearsay, but the fact. In both, the discharge presented all the characteristic marks of a genuine secretory action of the uterus, a fluid perfectly elaborated, and differing in every respect, from that of extravasated blood.

Our reply, here will be, that we believe these to be anomalies of nature; and furthermore, that the fluid discharged, is neither secreted within, or liberated from the uterine cavity. But that, the lining membrane, or membrana propria, on which this function greatly depends, is not confined within the strict

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limits of the cavity of the uterus, but is extended without the cervix, and reflected over the verge of the os tincæ. and that, it is from this portion of the uterus, in the cited cases before us, and in fact all those of a similar nature; that regains its wonted susceptibility to the stimulus of the ovaria, and keeps up the monthly evacuations to a certain period. This position, is strongly corroborated, by the fact, of the discharge diminishing in quantity in proportion to the advancement of pregnancy; and at the eighth month, when the whole of neck (by which, the fluid is secreted) is called into requisition, the process ceases entirely. Acceding now, this particular conformation of the parts, we are forcibly lead to pronounce it; no other than a work of superarrogation;

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the end of menstruation being perfected viz conception, there would seem to exist no further demand for the elaboration of this fluid. But it is contended by some, tho' far from being proved, that the menstrual blood, is, in some way or other neceſsary for the support of the fecundated ovum; if this be the fact, can we presume for a moment that nature would be so blind in her operations as to direct a paſsage for the escape of that which was intended and destined, for the nourishment and growth of the fetus in utero. By adverting to the humblest product of her hands, as well, as those gigantic fabricks, which are embraced within the three kingdoms of the habitable globe, we see exemplified a perfect obedience, to the strictest

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laws of economy, influenced by a sound and discriminating judgment. Besides, if a small globule of matter, (the fecundated ovum) demands for its nourishment, from three, to five ounces, which is the usual quantity secreted, what indeed, must be the amount demanded in the latter months of pregnancy? We can not believe, that the quantum, is augmented, in proportion to the increased bulk and consequent exigencies of the foetus. We shall therefore, conclude this division of our subject, by remarking, that the mystick curtain, is still suspended, before the presumeing penetration of mankind, in endeavours to unravel and explain the mysterious operations of nature. Much contrariety of opinion, has hitherto and

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still exists, as regards the source and nature, of this discharge. By some it is said to be poured out, or derived from the veins, others the arteries of the uterus; some maintain that it proceeds from the vagina; and an opinion of still more modern date, is, that there are receptacles, or sinuſses in the uterus for its collection. This last speculation, for truly, it is such, must have been fabricated in the closet, certainly not in the diſsecting room. But on flying from the study, to the anatomical museum, to ascertain the truth of of this stretch of the imagination, with a heart bounding with joy, at the idea, of promulgating a probable theory, the eyes were dazzled and beheld the imaginary sinusses. For surely, Morgani, who diſsected

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women at every stage of life, and under circumstances so propitious to the discovery, would have some where met, with declared, and recorded (if it existed) such an organization of the parts. We however, see, or hear of no such thing; neither has subsequent experience demonstrated their existence. If from the vagina, why does an obstruction arise, dependent on diseased uteri, especially scirrhus? There certainly can obtain, no good reason for its absence under such circumstances, if this be opinion be true. But we have still stronger evidence against it, Dr Hunter declares, that in a case of inversio uteri, he saw this fluid to ooze or distill from the mouths of the tortuous vessels of the uterus; these are unequivocally the arteries, for all anatomists allow that the

the veins of the uterus are streight and partake not at all of the spiral direction of the arteries; consequently, it proceeds neither from the vagina, or the veins of the uterus, but, from the arteries. We are tho' by no means to consider this discharge as an extravasation, or hemorrhage; for on being collected, it will neither coagulate, or seperate itself into parts like that of blood, extravasated from any other part of the body. Besides, it partakes not of the character of blood (as regard colour) from either the one or other system of vessels; being lighter than venous, and darker than arterial blood. We believe it (as all ready anticipated, and for reasons which we shall hereafter assign) to be a fluid sui generis, the result of a secretory action

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the arteries of the uterus. It seems somewhat difficult, whom, to aſsign the honor of having first given publicity to this fact; tho' the credit is generally inscribed to Mr. J. Hunter, as being first at least in Great Britain, to treat of the menses under this character.

The causes of menstruation, are divided into those of the efficient, and final kind. To dwell on the various and multiplied theories, which have been erected and put forth, to account for the cause of this phenomenon, would be a task too tedious and unprofitable. Many are consigned to the tomb of silence, and could boast but; of an ephemeral exis=tence; but there are others, that as yet, seem to claim some attention from wri:ters on this subject, not from any me:rit in themselves, but as being wholly incompatible

incompatible with the phenomena of menstruation, he deems it a duty to expose their absurdities, and by so doing, endeavour to blot them out from the pages of medical history. Among the first of those theories, which we shall take notice of; is that, of lunar influence. By Aristotle and his followers, it was supposed, that the fluids of the human body, were, like the ocean, influenced according to the phases of the moon, hence he concluded that menstruation resembled the tides. This hypothesis tho', is very promptly and effectually refuted, by the known fact, of women menstruating at every period of its increase and decline. Moreover, if this were true, why should not this discharge take place in men and all the inferior animals? for they are equally

=ly as much exposed to its nocturnal rays. Galen, perceiving the absurdity of this doctrine, said it arose from general plethora. But in this, we discover a like inconsistency; for we know, that blood detracted from any other part of the system, prior to, or during the very act of menstruation, to several times the quantity, does not interupt this flow; also, the amount dischaged is as great from the feeble and infirm women, as from the hearty and robust. To the foregoing objections may be added, the instance of the celebrated Hungarian sisters, who, from monstrous formation were united together. Although the same blood flowed in each, on account of the anastamoses of the abdominal blood vessels at the loins, they differed frequently, both in the

period

period and quantity of their menstruation. It has also been attributed to fermentation. By the chemists, who farther this theory, it was contended; that at the time of puberty, there existed in the uterus, a venereal œstus or leven, and, that certain salts were thrown off by the uterine arteries, which produced this fermentation. How their ingenuity, could convert the uterus into a chemical labaratory, we are at a loss to fancy; for certainly no part of that viscus, is as yet, discovered that seems calculated for such an office. By Cullen, to whom we owe so much, and whose ingenuity, seemed paramount (if possible) with his judgement; menstruation is ascribed to the agency of patial plethora, or topical congestion. His position runs thus; that all the parts

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of the system were regularly, and succeſsively evolved; and that the evolution of each particular part must especially depend, upon that plethora or increased congestion in its proper veſsels. This, he supposes to be, the situation of the uterus at the period of puberty; and that this congestion, or increased determination of blood to its veſsels, either by its mechanical distention, forcing the extremities of the uterine arteries terminating on the surface of its cavity; and thereby causing an effusion of blood there, or, by its presence stimulating the veſsels, and exciting in them an hemorrhagic effort which forces their extremities, and consequently, producing the same effect. In either way he accounts for the

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first appearance of blood from the uterus. This emptied and relaxed condition of the vessels of the uterus, gives rise to a new congestion in them, so as to put them on a balance with the rest of the system, till they are again brought to that degree of distention, or, induce a new hemorrhagic effort, producing the same result as in the former or first instance. Thus an evacuation of blood from the uterus being once establised, he concludes, (reasoning by analogy alone, from the known disposition of system to contract certain habits) that the monthly evacuations, depend on a balance or equipoise of the circulation, kept up by the force of habit. But this beautifull and ingenious theory, must share the melancholy

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fate of those, that preceded it; as being totally inadiquate to explain all the phenomena of menstruation. Admiting this local determination, which evidently is the fact, what does it prove? "Every gland when excited by its appropriate stimulus, becomes a center of fluxion. This is very fairly manifesteds, in the testicle; which, being stimulated by lascivious ideas, secretes the semen masculinum. The proposition also holds good as regads the uterus, it, also is called into action by the stimulus derived from the ovaria; upon the existence, and perfectly sound and developed state of which, essentially depends the healthy performance of this Function." This is proven by the experiments of Mr. Pott, and from the fact of the

menses

menses, being retained, or suppressed in diseased states of these organs. If this congestion of the vessels, or the hemorrhagic effort induced by the distention, is the cause of menstruation; evidently, the effused fluid should and would present all the characteristick marks of hemorrhagic blood. But this we deny for reasons already assigned. The last theory, that we shall take notice of, to account for the cause of this all important function, and in the accuracy of which we acknowledge our belief; is that, of the existence of a secretory action resident in the uterus. In conformation of this opinion, we have the united voice of Drs Denman, Burns, James, Chapman and Dewees. Supported by such authority, I do not hesitate a moment, to repose with con=

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fidence in the adopted position. But to give further validity, than the mere recital of names, altho' they stand among the brightest satellites of the medical world, we will briefly cite some of the leading arguments adduced in its support. 1st That the uterus in its villous and vascular structure resembles a gland, being equally liable to scirrhus an cancer. 2d By the arrangement of its vessels, it is evidently designed that the circulation should be impeded for the purpose of secretion. The arteries are not only exceedingly convoluted, but are larger, and with thiner coats than their corresponding veins. Haller also says, that the blood is brought in larger quantities to the womb, and more quickly through its lax and ample arteries, and returns with difficulty

ty, from the rigidity and narrowneſs of the veins. 3d That, in many of the inferior animals, during the season of venereal incalescence, there is an uterine effusion, undoubtedly a secretion, which seems to to answer the same end as menstruation: this tho' differs from the menstrual blood, as regards, colour; not aſsuming its red hue. If this venereal desire becomes violently exasperated, from confinement, or other causes, the discharge aſsumes a sanguineous appearance; this frequently obtains in the bitch, kept from the male. And lastly, that the menses are a fluid sui generis, or, at least differing very eſsentially from blood, poſseſsing neither its colour, odour, or coagulability, and on chemical analyses presenting different results. If this be <u>not</u> truly, the efficient and physical cause of menstruation, its influence has at

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least, divested much of empiricism from the treatment, of the diseased actions of this function; and has enabled the practitioner, to direct with much more precision, and prospect of success, those articles of the Mat: Med: called emmenagogues which have been so much abused and stigmatized by preceding generations. The ultimate, or final end of menstruation, is, to give to the uterus, an aptitude to conception. Little, or no diversity of sentiment now exist as respects the accuracy of this opinion; nay, it may be called a fact. Under such circumstances, we deem it wholly unnecessary, to enter into any argument or statement of facts in its support. We shall therefore conclude finally; hoping that we have done the subject patial justice; and that, if it meets not decided approbation, it will at least answer the end for which it is destined.

Finis.